WHAT IS CLAIMED IS:

1   1.   A method comprising:

2   receiving an indication to dynamically integrate a component into an

3   executing application;

4   loading the component; and

5   linking the component to the application by:

6   obtaining the component's integration interface, the integration

7   interface comprising methods for managing the component;

8   and

9   invoking an initialize method of the integration interface.

1   2.   The method of claim 1, wherein the component is a new component that

2   replaces an existing component, and the method additionally comprises

3   invoking a replace method of the integration interface, the replace method

4   to transition an existing state of the existing component into the new

5   component.

1   3.   The method of claim 1, additionally comprising supporting the

2   component's ability to allow other components to communicate with it by:

3   invoking a publish method of the integration interface and specifying one

4   or more interfaces to publish to other components; and

5   storing the one or more interfaces in an interface clearinghouse.

1   4.   The method of claim 3, additionally comprising supporting the

2   component's ability to communicate with other components by:

3   consulting the interface clearinghouse to determine one or more interfaces

4   to retrieve from other component;

5   invoking a retrieve method of the integration interface and specifying an

6   interface of the one or more interfaces to retrieve from other

7   component; and

8   using the retrieved interface to communicate with other components.

1   5.   The method of claim 1, additionally comprising invoking a stop method of

2   the integration interface when the component is ready to be shut down.

1   6.   The method of claim 1, wherein the application is in a network, and said

2   loading the component comprises retrieving the component from a

3   member in the network.

1   7.   The method of claim 6, wherein the member comprises a peer.

1   8.   The method of claim 7, wherein the peer comprises another component

2   loader in the network.

1   9.   The method of claim 6, wherein the member comprises a host in the

2   network.

1   10.   An apparatus comprising:

2   a component loader to load requested components of a plurality of

3   components into an application, the plurality of components

4   corresponding to an application, and each implementing an

5   integration interface having a number of methods for managing

6   loaded components;

7   an interface clearinghouse to store and manage interfaces corresponding

8   to the loaded components; and

9   a messaging mechanism for external entities to communicate with the

10   loaded components.

1   11.   The apparatus of claim 10, wherein the integration interface comprises:

2   an initialize method to transition a given component into a state to operate;

3   and

4   a stop method to transition the given component into a destroy state.

1   12.   The apparatus of claim 11, additionally comprising a replace state to

2   replace an old component with a new component by transitioning an

3   existing state of the old component to the new component.

1   13.   The apparatus of claim 10, wherein the application is in a network, and

2   said loading the component comprises retrieving the component from a

3   member in the network.

1   14.   A system comprising:

2   an integration interface having a plurality of methods for managing a

3   component;

4   at least one component that implements the integration interface;

5   a components repository for storing the at least one component;

6   a component framework corresponding to an application to manage the at

7   least one component using the integration interface, the component

8   framework having:

9   a component loader to load requested components from the

10   components repository into an application;

11   an interface clearinghouse to store and manage interfaces

12   corresponding to the loaded components; and

13   a messaging mechanism for external entities to communicate with

14   the loaded components.

1   15.   The system of claim 14, additionally comprising a communication bus for

2   inter-components communication.

1   16.   The system of claim 14, wherein the communication bus is established

2   after at least one call to a publish method and a retrieve method of the

3   integration interface.

1   17.   The system of claim 14, wherein the application is in a network, and said

2   loading the component comprises retrieving the component from a

3   member in the network.

1   18.   A machine-readable medium having stored thereon data representing

2   sequences of instructions, the sequences of instructions which, when

3   executed by a processor, cause the processor to:

4   receive an indication to dynamically integrate a component into an

5   executing application;

6   load the component; and

7   link the component to the application by:

8   obtaining the component's integration interface, the integration

9   interface comprising methods for managing the component;

10   and

11   invoking an initialize method of the integration interface.

1   19.   The machine-readable medium of claim 18, wherein the component is a

2   new component and the instructions cause the processor to replace an

3   existing component by invoking a replace method of the integration

4   interface, the replace method to transition an existing state of the existing

5   component into the new component.

1   20.   The machine-readable medium of claim 18, the instructions causing the

2   processor to additionally support the component's ability to allow other

3   components to communicate with it by:

4   invoking a publish method of the integration interface and specifying one

5   or more interfaces to publish to other components; and

6   storing the one or more interfaces in an interface clearinghouse.

1 21.   The machine-readable medium of claim 20, the instructions causing the

2   processor to additionally support the component's ability to communicate

3   with other components by:

4   consulting the interface clearinghouse to determine one or more interfaces

5   to retrieve from other component;

6   invoking a retrieve method of the integration interface and specifying an

7   interface of the one or more interfaces to retrieve from other

8   component; and

9   using the retrieved interface to communicate with other components.

1 22.   The machine-readable medium of claim 18, wherein the application is in a

2   network, and said loading the component comprises retrieving the

3   component from a member in the network.

1 23.   An apparatus comprising:

2   at least one processor; and

3   a machine-readable medium having instructions encoded thereon, which

4   when executed by the processor, are capable of directing the

5   processor to:

6   receive an indication to dynamically integrate a component into an

7   executing application;

8   load the component; and

9   link the component to the application by:

10   obtaining the component's integration interface, the

11   integration interface comprising methods for

12   managing the component; and

13   invoking an initialize method of the integration interface.

1 24. The apparatus of claim 23, wherein the component is a new component

2   and the instructions cause the processor to replace an existing component

3   by invoking a replace method of the integration interface, the replace

4   method to transition an existing state of the existing component into the

5   new component.

1 25. The apparatus of claim 23, the instructions causing the processor to

2   additionally support the component's ability to allow other components to

3   communicate with it by:

4   invoking a publish method of the integration interface and specifying one

5   or more interfaces to publish to other components; and

6   storing the one or more interfaces in an interface clearinghouse.

1 26. The apparatus of claim 25, the instructions causing the processor to

2   additionally support the component's ability to communicate with other

3   components by:

4   consulting the interface clearinghouse to determine one or more interfaces

5   to retrieve from other component;

6   invoking a retrieve method of the integration interface and specifying an

7   interface of the one or more interfaces to retrieve from other

8   component; and

9   using the retrieved interface to communicate with other components.

1   27.   An apparatus comprising:

2   means for loading requested components of a plurality of components into

3   an application, the plurality of components corresponding to an

4   application, and each implementing an integration interface having

5   a number of methods for managing loaded components;

6   means for storing and managing interfaces corresponding to the loaded

7   components; and

8   means for external entities to communicate with the loaded components.

1   28.   The apparatus of claim 27, wherein the integration interface comprises:

2   means for transitioning a given component into a state to operate; and

3   means for transitioning the given component into a destroy state.

1   29.   The apparatus of claim 27, additionally comprising means for replacing an

2   old component with a new component by transitioning an existing state of

3   the old component to the new component.

1   30.   The apparatus of claim 27, wherein the application is in a network, and

2   said means for loading the component comprises means for retrieving the

3   component from a member in the network.